

What is claimed is:

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1. A laminated structure comprising:
a non-woven substrate;
at least one elastic strand; and
a hot-melt adhesive composition bonding the non-woven substrate and the at least one elastic strand to one another, wherein the adhesive composition includes atactic polypropylene having a degree of crystallinity of less than about 20% and a number-average molecular weight between about 500 and about 40,000, and isotactic polypropylene having a degree of crystallinity of at least about 40% and a number-average molecular weight between about 3,000 and about 150,000, wherein the adhesive composition is hot-melt processable at less than about 450 degrees Fahrenheit.

2. The laminated structure of Claim 1, wherein the degree of crystallinity of the atactic polypropylene is less than about 15%.

3. The laminated structure of Claim 1, wherein the degree of crystallinity of the isotactic polypropylene is at least about 60%.

4. The laminated structure of Claim 1, wherein the degree of crystallinity of the isotactic polypropylene is at least about 80%.

5. The laminated structure of Claim 1, wherein the isotactic polypropylene is at least 60% isotactic.

6. The laminated structure of Claim 1, wherein the isotactic polypropylene is at least 70% isotactic.

7. The laminated structure of Claim 1, wherein the isotactic polypropylene is at least 80% isotactic.

8. The laminated structure of Claim 1, wherein the number-average molecular weight of the atactic polypropylene is between about 1,000 and about 30,000.

9. The laminated structure of Claim 1, wherein the number-average molecular weight of the isotactic polypropylene is between about 5,000 and about 100,000.

10. The laminated structure of Claim 1, wherein the adhesive composition is hot-melt processable in a temperature range between about 350 degrees Fahrenheit and about 400 degrees Fahrenheit.

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11. The laminated structure of Claim 1, wherein the adhesive composition has a melt index between about 100 and about 2000 grams per 10 minutes.

12. The laminated structure of Claim 1, wherein the adhesive composition has a melt index between about 200 and about 1800 grams per 10 minutes.

13. The laminated structure of Claim 1, wherein the adhesive composition has a melt index between about 500 and about 1500 grams per 10 minutes.

14. The laminated structure of Claim 1, comprising between about 50 and about 90 weight percent of the atactic polypropylene, and between about 5 and about 50 weight percent of the isotactic polypropylene.

15. The laminated structure of Claim 1, wherein the non-woven substrate comprises at least one of the group consisting of a necked-bonded laminate, a stretch-bonded laminate, a spunbond-meltblown-spunbond laminate, a polypropylene spunbonded layer, and a polyethylene layer in combination with a polypropylene spunbonded layer.

16. The laminated structure of Claim 1, wherein the at least one elastic strand comprises at least one of the group consisting of: styrene-isoprene-styrene, styrene-butadiene-styrene, styrene-ethylene/propylene-styrene, styrene/ethylene-co-butadiene/styrene, and polyurethane.

17. The laminated structure of Claim 1, wherein the at least one elastic strand can be stretched up to about 300%.

18. The laminated structure of Claim 1, wherein the at least one elastic strand can be stretched up to about 500%.

19. The laminated structure of Claim 1, wherein the at least one elastic strand can be stretched up to about 800%.

20. The laminated structure of Claim 1, wherein the adhesive composition is stretchable.

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21. A laminated structure comprising:

a first non-woven elastic substrate;

a second non-woven substrate; and

a hot-melt adhesive composition bonding the first non-woven elastic substrate and the second non-woven substrate to one another, wherein the adhesive composition includes atactic polypropylene having a degree of crystallinity of less than about 20% and a number-average molecular weight between about 500 and about 40,000, and isotactic poly having a degree of crystallinity of at least about 40% and a number-average molecular weight between about 3,000 and about 150,000, wherein the adhesive composition is hot-melt processable at less than about 450 degrees Fahrenheit.

22. The laminated structure of Claim 21, wherein the degree of crystallinity of the atactic polypropylene is less than about 15%.

23. The laminated structure of Claim 21, wherein the degree of crystallinity of the isotactic polypropylene is at least about 60%.

24. The laminated structure of Claim 21, wherein the degree of crystallinity of the isotactic polypropylene is at least about 80%.

25. The laminated structure of Claim 21, wherein the isotactic polypropylene is at least 60% isotactic.

26. The laminated structure of Claim 21, wherein the isotactic polypropylene is at least 70% isotactic.

27. The laminated structure of Claim 21, wherein the isotactic polypropylene is at least 80% isotactic.

28. The laminated structure of Claim 21, wherein the number-average molecular weight of the atactic polypropylene is between about 1,000 and about 30,000.

29. The laminated structure of Claim 21, wherein the number-average molecular weight of the isotactic polypropylene is between about 5,000 and about 100,000.

30. The laminated structure of Claim 21, wherein the adhesive composition is hot-melt processable in a temperature range between about 350 degrees Fahrenheit and about 400 degrees Fahrenheit.

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31. The laminated structure of Claim 21, wherein the adhesive composition has a melt index between about 100 and about 2000 grams per 10 minutes.

32. The laminated structure of Claim 21, wherein the adhesive composition has a melt index between about 200 and about 1800 grams per 10 minutes.

33. The laminated structure of Claim 21, wherein the adhesive composition has a melt index between about 500 and about 1500 grams per 10 minutes.

34. The laminated structure of Claim 21, wherein the adhesive composition is stretchable.

35. The laminated structure of Claim 21, comprising between about 50 and about 90 weight percent of the atactic polypropylene, and between about 5 and about 50 weight percent of the isotactic polypropylene.

36. The laminated structure of Claim 21, wherein the second non-woven substrate is non-elastic.

37. The laminated structure of Claim 21, wherein the second non-woven substrate is elastomeric.

38. The laminated structure of Claim 21, wherein the first non-woven elastic substrate is machine-direction stretchable.

39. The laminated structure of Claim 21, wherein the first non-woven elastic substrate is cross-direction stretchable.

40. The laminated structure of Claim 21, wherein the second non-woven substrate is machine-direction stretchable.

41. The laminated structure of Claim 21, wherein the second non-woven substrate is cross-direction stretchable.

42. The laminated structure of Claim 21, wherein the first non-woven elastic substrate comprises at least one of the group consisting of a necked-bonded laminate, a stretch-bonded laminate, a polypropylene spunbonded layer, a polyethylene layer in combination with a polypropylene spunbonded layer, a styrene-isoprene-styrene strand, a styrene-butadiene-styrene strand, a styrene-ethylene/propylene-styrene strand, a styrene/ethylene-co-butadiene/styrene strand, and a polyurethane strand.

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43. The laminated structure of Claim 21, wherein the second non-woven substrate comprises at least one of the group consisting of a necked-bonded laminate, a stretch-bonded laminate, a spunbond-meltblown-spunbond laminate, a polypropylene spunbonded layer, a polyethylene layer in combination with a polypropylene spunbonded layer, a styrene-isoprene-styrene strand, a styrene-butadiene-styrene strand, a styrene-ethylene/propylene-styrene strand, a styrene/ethylene-co-butadiene/styrene strand, and a polyurethane strand.

44. The laminated structure of Claim 21, wherein the first and second substrates are each part of a single substrate folded onto itself.

45. The laminated structure of Claim 21, wherein at least one of the first and second substrates can be stretched between about 25% and about 300%.

46. The laminated structure of Claim 21, wherein at least one of the first and second substrates can be stretched between about 70% and about 200%.

47. The laminated structure of Claim 21, wherein at least one of the first and second substrates can be stretched between about 100% and about 150%.

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48. An absorbent article comprising:

a first elastomeric substrate;

a second substrate; and

a hot-melt adhesive composition bonding the first substrate and the second substrate to one another, wherein the adhesive composition includes between about 50 and about 90 weight percent of an atactic polypropylene having a degree of crystallinity of less than about 20% and a number-average molecular weight between about 500 and about 40,000, and between about 5 and about 50 weight percent of an isotactic polypropylene having a degree of crystallinity of at least about 40% and a number-average molecular weight between about 3,000 and about 150,000, wherein the adhesive composition is hot-melt processable at less than about 450 degrees Fahrenheit.

49. The absorbent article of Claim 48, wherein the degree of crystallinity of the atactic polypropylene is less than about 15%.

50. The absorbent article of Claim 48, wherein the degree of crystallinity of the isotactic polypropylene is at least about 60%.

51. The absorbent article of Claim 48, wherein the degree of crystallinity of the isotactic polypropylene is at least about 80%.

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52. The absorbent article of Claim 48, wherein the isotactic polypropylene is at least 60% isotactic.

53. The absorbent article of Claim 48, wherein the isotactic polypropylene is at least 70% isotactic.

54. The absorbent article of Claim 48, wherein the isotactic polypropylene is at least 80% isotactic.

55. The absorbent article of Claim 48, wherein the number-average molecular weight of the atactic polypropylene is between about 1,000 and about 30,000.

56. The absorbent article of Claim 48, wherein the number-average molecular weight of the isotactic polypropylene is between about 5,000 and about 100,000.

57. The absorbent article of Claim 48, wherein the adhesive composition is hot-melt processable in a temperature range between about 350 degrees Fahrenheit and about 400 degrees Fahrenheit.

58. The absorbent article of Claim 48, wherein the adhesive composition has a melt index between about 100 and about 2000 grams per 10 minutes.

59. The absorbent article of Claim 48, wherein the adhesive composition has a melt index between about 200 and about 1800 grams per 10 minutes.

60. The absorbent article of Claim 48, wherein the adhesive composition has a melt index between about 500 and about 1500 grams per 10 minutes.

61. The absorbent article of Claim 48, wherein the adhesive composition is stretchable.

62. The absorbent article of Claim 48, wherein the second substrate is non-elastic.

63. The absorbent article of Claim 48, wherein the second substrate is elastomeric.

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64. The absorbent article of Claim 48, wherein the first elastomeric substrate comprises at least one of the group consisting of a necked-bonded laminate, a stretch-bonded laminate, a polypropylene spunbonded layer, a polyethylene layer in combination with a polypropylene spunbonded layer, a styrene-isoprene-styrene strand, a styrene-butadiene-styrene strand, a styrene-ethylene/propylene-styrene strand, a styrene/ethylene-co-butadiene/styrene strand, and a polyurethane strand.

65. The absorbent article of Claim 48, wherein the second substrate comprises at least one of the group consisting of a necked-bonded laminate, a stretch-bonded laminate, a spunbond-meltblown-spunbond laminate, a polypropylene spunbonded layer, a polyethylene layer in combination with a polypropylene spunbonded layer, a styrene-isoprene-styrene strand, a styrene-butadiene-styrene strand, a styrene-ethylene/propylene-styrene strand, a styrene/ethylene-co-butadiene/styrene strand, and a polyurethane strand.

66. The absorbent article of Claim 48, wherein the second substrate comprises at least one of the group consisting of non-woven material, woven material, film, and an elastic component.

67. The absorbent article of Claim 48, wherein the first and second substrates are each part of a single substrate folded onto itself.

68. The absorbent article of Claim 48, wherein at least one of the first and second substrates can be stretched between about 25% and about 300%.

69. The absorbent article of Claim 48, wherein at least one of the first and second substrates can be stretched between about 70% and about 200%.

70. The absorbent article of Claim 48, wherein at least one of the first and second substrates can be stretched between about 100% and about 150%.

71. The absorbent article of Claim 48, comprising a diaper.

72. The absorbent article of Claim 48, comprising swim wear.

73. The absorbent article of Claim 48, comprising child training pants.

74. The absorbent article of Claim 48, comprising an adult incontinence garment.

75. The absorbent article of Claim 48, comprising a feminine care product.

76. The absorbent article of Claim 48, comprising a medical garment.

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